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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,121	10/15/2001	Naomasa Shiraishi	109919	1222
7590 12/16/2003				
EXAMINER				
MOHAMEDULLA, SALEHA R				
ART UNIT PAPER NUMBER				
1756				

DATE MAILED: 12/16/2003

Oliff & Berridge
PO Box 19928
Alexandria, VA 22320

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/869,121

Applicant(s)

SHIRAISHI, NAOMASA

Examiner

Saleha R. Mohamedulla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 9, 10 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11, and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-18 are pending. Claims 9, 10 and 12 are withdrawn from consideration. Claims 1-8, 11, and 13-18 are considered.

Restrictions/Elections

1. The traverse of the restriction requirement in the remarks of the amendment has been carefully considered by the Examiner but is not deemed to be persuasive for the reasons of record as set forth in the last Office action in combination with the following remarks. Applicant argues that the search of the non-elected claims can be made without serious burden. However, the inventions as claimed are clearly distinct and capable of supporting separate patents. The inventions need not be completely independent in order to have a proper restriction requirement (see M.P.E.P. 802.01). One-way distinctness is all that is necessary in a restriction between inventions which are related as a product, process of using that product and apparatus (see M.P.E.P. 806.05(h)). Clearly to examine all grouped inventions would require a divergent field of search and consideration of product and apparatus embodiments for process inventions and process embodiments for the product and apparatus inventions, as well as product embodiments for the apparatus invention. requiring an undue burdensome search and examination.

Therefore, the restriction requirement is still proper and made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 11, and 13-18 are rejected under 35 U.S.C. 102(b) as being anticipated by US# 5,364,716 to Nakagawa.


Nakagawa teaches a pattern exposing method that forms a predetermined resist pattern on a substrate by exposing a first resist layer which is formed on the substrate using a first reticle which includes a first pattern for exposing a first corresponding pattern on the first resist layer by use of a phase shift of light transmitted through the first reticle, developing the exposed first resist layer, exposing a second resist layer which is formed on the entire surface of the substrate, including a top of the first resist layer, using a second reticle which has a second pattern for exposing a second corresponding pattern on the second resist layer by use of light transmitted through the second reticle, where the second corresponding pattern overlaps at least a part of the first corresponding pattern, and developing the second resist layer so that a part of the first corresponding pattern is removed by the second corresponding pattern and the predetermined resist pattern is formed (Abstract). Therefore, Nakagawa teaches forming and transferring a parent pattern to form a phase shift mask and transferring the parent pattern onto a third substrate. A first demagnification exposure is used for the first exposure and a second demagnification exposure is used for the second exposure (col. 6, lines 5-25). Therefore,

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Nakagawa teaches different exposure conditions. The second demagnification condition is smaller than the first demagnification condition because portions of the substrate are exposed in this condition that were not exposed in the first condition. The conditions are resolution and numerical aperture conditions as Nakagawa teaches demagnification conditions. Therefore, the limitations of claim 3 and 4 are met. Figure 15 shows that the pattern is stitched. Claims 11 and 13 are product by process claims and are not limited by the process limitations. The claims are only limited by structural recitations. Because Nakagawa teaches a photomask, the claim limitations are met. Nakagawa also teaches that one of the mask is for enhancing resolution and one of the masks is for defining shape. The phase shift reticle is for enhancing resolution and the other reticle defines shape.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Saleha Mohamedulla whose telephone number is (703) 308-1260. The Examiner can normally be reached Monday-Friday, from 8:00 AM to 4:30 PM. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mark Huff, can be reached on (703) 308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310. The After Final fax phone number is (703) 872-9311. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Saleha R. Mohamedulla
Patent Examiner
Technology Center 1700
December 5, 2003